An interesting species of Campodea, of which the accompanying cut (Fig. 6) is a tolerable likeness, though designed to illustrate another species (*S. staphylinus* Westw.) was discovered by Mr. Cooke. Both the European and our common species live under stones in damp places, and the occurrence of this form in the water is quite remarkable. The other species are blind, and I could detect no eyes in the Mammoth Cave specimen.

A small spider was captured by Mr. Cooke, but afterwards lost; it was brown in colour, and possibly distinct from the *Anthrobia monmouthia* Tellkf. (Fig. 7), which is an eyeless form, white and very small, being but half a line in length. The family of Harvest men is represented by a small white form, described by Tellkampf under the name of *Phalongodes armata* (Fig. 8), but now called *Acanthocheir armata* Lucas. The body alone is but half a line long, the legs measuring two lines. It should be borne in mind that many of the spiders, as well as the Thysanura, live in holes and dark places, so that we could naturally find them in caves. So, also, with the Myriopods, of which a most remarkable form (Fig. 9 front of head) was found by Mr. Cooke three or four miles from the mouth of the cave. It is the only truly hairy species known, an approach to it being found in *Pseudotremia Vudii* Cope. It is blind, the other species of this group which Prof. Cope found living in caves having eyes. The long hairs arranged along the back seem to suggest that they are tactile organs, and of more use to the thousand legs in making its way about the nooks and crannies of a perpetually dark cave than eyes would be. It was found by Mr. Cooke under a stone.

Prof. Cope has contributed to the "Proceedings of the American Philosophical Society" (1869, p. 171) an interesting account of the cave mammals, articulates, and shells of the middle states. He says that "myriopods are the only articulates which can be readily found in the remote regions of the caves (of West Virginia) and they are not very common in a living state." The *Pseudotremia cavernarum* which he describes, "inhabits the deepest recesses of the numerous caves which abound in Southern Virginia, as far as human steps can penetrate. I have not seen it near their mouths, though its eyes are not undeveloped, nor smaller than those of many living in the forest. Judging from its remains, which one finds under stones, it is an abundant species, though rarely seen by the dim light of a candle even after considerable search. Five specimens only were procured from about a dozen caves." The second species, *P. Vudii* Cope, was found in Montgomery Co., and he thinks it was not found in a cave. Prof. Hyatt informs me that he saw near the "Bottomless Pit" in Mammoth Cave, a brownish centipede-like myriopod, over an inch in length, which moved off in a rapid zigzag motion. Unfortunately, he did not capture it.

A. S. PACKARD, JUN.

(*To be continued*)

NOTES

WE have received information of a most munificent act on the part of that veteran in Geological Science, Sir William E. Logan, in supplementing, by the handsome gift of 18,000 dols., the sum of 2,000 dols. given by him and his brother, Mr. Hart Logan, last year towards the endowment of the Chair of Geology in M'Gill University, Montreal. The "Logan Chair of Geology" will be at once a commemoration of Sir William's name in connection with the higher education of our colonists, and a means of perpetuating the teaching of the Science for which he has done so much, as well as of securing the training of a succession of young men who may worthily follow up his investigations in the wide field of Canadian Geology. Principal Dawson, who at present occupies the Chair of Geology, will be the first "Logan Professor," and it is intended that the endowment shall, as soon as possible, be made the means of relieving him from the teaching of some other portions of natural science, in order that he may more fully devote his time to Geology and Palæontology.

PROF. HUXLEY is now on his way home to England, having been last heard of from Naples. His health is very greatly restored by his absence from work, and the effects of the Egyptian climate.

DR. M'NAB, Professor of Botany and Geology at the Royal Agricultural College, Cirencester, has been appointed Professor of Botany to the Royal College of Science and Art, Dublin, in the place of Prof. Thiselton Dyer. The appointment is a good one, on which we congratulate the Science and Art Department. The lectureship at the Cirencester College is now vacant.

THE death of the Swiss palæontologist, M. Pictet de la Rive, Professor in the Academy of Geneva, which we noticed last week, took place on the 15th ult. at the age of sixty-two, and was occasioned by fever induced by a severe accident.

DR. GEORGE BURROWS, F.R.S., has been re-elected President of the College of Physicians.

PROF. HUXLEY was defeated by a small majority by Lord Neaves in the election for the Rectorship of St. Andrew's University. Prof. Sylvester was also, we regret to say, unsuccessful in his candidature for the School Board for Marylebone. We understand, however, that there will shortly be another vacancy on the Board, when we trust Science will once more put in its claim.

THE Brighton Aquarium was formally opened to the public on Saturday last.

IT has been decided to give a private view and evening reception in the Picture Galleries of the London International Exhibition of 1872 before the 1st of May, to which distinguished foreigners and holders of season tickets will be invited.

AT Rugby Mr. Wilson and Mr. Seabroke have tried the experiment of giving regular lectures on Astronomy to a class consisting of volunteers from the school and residents in the town. Note-books were shown up and corrected, and an examination held at the end. About seventy attended, twenty being members of the school; thirty showed up note-books, and eighteen presented themselves for examination. Advocates of women's education will be pleased to learn that the two best note-books were written by girls, and that in the examination, which was a stiff one (we have seen the paper), girls held the second, third, and fifth places. The proceeds are for buying books for the Temple Observatory.

AN organisation, entitled the Bloomington Scientific Association, was instituted at Bloomington, Illinois, in 1871, having for its object the diffusion and popularising of science in that State. The officers are Prof. B. S. Perry, Mr. R. H. Holder, Dr. Vasey, and Mr. J. A. Jackman. The society has already a large number of members, and meets frequently.

THE great depression of temperature during November and the early part of December, was followed by an extraordinarily long period of more than three months' remarkably mild weather. For the ninety-seven days from December 13 to March 18, Mr. Glaisher's Greenwich tables, recorded weekly in the *Gardener's Chronicle*, show that the temperature was above the average on eighty-nine, and below the average on only eight days, the mean excess for the whole period being 5°·1. During the whole of this period the thermometer fell below the freezing point on four nights only, viz., January 15 and 16, and March 10 and 11; the lowest temperature recorded being 28°·3 Fahr. on the first and last of these dates.

February, it will be seen, was entirely free from frost, the minimum for that month being 32°·4, on the 28th. The warmest period was from March 1 to 8, when the maximum temperature ranged each day from 57°·1 to 60°·8. It will be interesting to know whether so long a period of exceptionally high temperature, including fifty-three consecutive days entirely free from frost, has ever been recorded before in the depth of winter. On March 19 the average temperature of the day fell below the mean, and continued so for nine days, till the 27th. The minimum temperature for March was on the 21st, 26°·2 Fahr., being the lowest recorded since Dec. 9. There were nine frosty nights in March, against the two in the whole of the two preceding months. For the week ending March 26 the mean temperature was 34°, or 16° lower than the mean for the week ending March 7.

A CORRESPONDENT of *The Blue* strongly urges the desirability of the formation of a Natural History Society at Christ's Hospital; and the editor of that magazine promises his assistance to the proposal. We heartily wish it success.

THE proposed Act for appropriating the Yellowstone Park for public purposes (to which we recently referred), has passed the Congress of the United States. The following are extracts from the Bill:—"That the tract of land in the territories of Montana and Wyoming (as already described) is hereby reserved and withdrawn from settlement, occupancy, or sale under the laws of the United States, and dedicated and set apart as a public park or pleasuring-ground for the benefit and enjoyment of the people. That said public park shall be under the exclusive control of the Secretary of the Interior, whose duty it shall be, as soon as practicable, to make and publish such rules and regulations as he may deem necessary or proper for the care and management of the same. Such regulations shall provide for the preservation from injury or spoliation of all timber, mineral deposits, natural curiosities, or wonders within said park, and their retention in their natural condition. The Secretary may, in his discretion, grant leases for building purposes for terms not exceeding ten years, of small parcels of ground, at such places in said park as shall require the erection of buildings for the accommodation of visitors; all of the proceeds of said leases, and all other revenues that may be derived from any source connected with said park, to be expended under his direction in the management of the same, and the construction of roads and bridle-paths therein. He shall provide against the wanton destruction of the fish and game found within said park, and against their capture or destruction for the purposes of merchandise or profit." Such a step in the interest of science deserves more than a passing recognition from this side the water.

THE *British Medical Journal* prints the following admirable reply to the extraordinary article which appeared in the *Saturday Review* of the 16th ult., on Dr. Liebreich's lecture on "Turner and Mulready," which we gave last week:—"It is not, of course, always to be expected that *Saturday* Reviewers should have a very profound knowledge of their subjects; but it might be thought advisable that an analysis of an optical argument should not be publicly undertaken by a gentleman who is ignorant of the first rudiments of the subject, and so little acquainted with even the alphabet of its language as the gentleman who discusses, in the last *Saturday Review*, the visual defects of Turner and Mulready. He pronounces a 'verdict of not proven' on Mr. Liebreich's argument; and his fitness for appreciating a discussion of the effects of yellow discoloration of the lens, occurring with advancing old age, on Mulready's perception of colour, may be estimated by the following sentence: 'Let us suppose a person to put on a pair of yellow spectacles. The effect is *assumed* to be, and we think *correctly*, that the *yellow* in a landscape or in a picture, unless extra strong, would be *scarcely recognised;* and that the *blues also*, unless very decisive, would be *neutralised*. The consequence seems to follow, that the painter would throw *ultra force into both yellow and blue:* though against this supposition it must not be forgotten that the spectacle or the crystalline lens, as the case may be, would discolour precisely in *the same degree the tones in nature and the pigments on the palette.*' The italics are ours. There is scarcely a word in this astonishing statement which is not entirely a mistake. It was not assumed, but it is known, that, seen through a yellow glass, the yellows in a landscape are seen relatively more strongly, while the blues are partly neutralised. It was not assumed that the effects of viewing a landscape and a picture through a yellow lens or glass are the same; but, on the contrary, it was stated, as the result of experiment, that they are entirely different. The retina becomes presently so far accustomed to the yellow medium, that the strong lights reflected from blue surfaces in nature overpower the yellowness of the medium, and the blues of a landscape are presently but little neutralised. The reflections from pigments, poor imitations as as they are, at the best, of nature, have not the same power; a large part is neutralised by the yellow glass or lens: and to produce with pigments, on a canvas, blues which satisfy his eye as comparable with those which he sees in nature, the painter—who in old age has the pigment-yellowness of senile change in the lens—employs much deeper blues than he would have done in youth, or than impress youthful eyes as representing the natural tints truthfully. That is why, on Liebreich's theory, Mulready, in painting the same picture in old age which he had painted in middle life, introduced ultramarine into the flesh tints—painted a linen smock of the brilliancy of a glittering silk; and that is the key which he affords to the prevailing excess of purple tints which the official catalogue describes as characterising the latest works of this great artist. The great master himself was, in his later life, dissatisfied for this reason with the colour of his earlier works; he thought them too brown, and used to warn his pupils to paint with stronger blues, especially in the grey shadows.'

IN a letter addressed by von Heuglin to Middendorff, of the St. Petersburg Academy, we find the fullest details of the explorations instituted by that eminent traveller during the past summer in the Nova Zembla seas. In this he remarks that the original plan included a visit to the mouths of the Obi and Yenisei, perhaps even extending to the island of New Siberia. This, however, was found to be impracticable on account of unseasonable weather, as it was not till the 6th of August that they reached the Straits of Matotschkin. Up to that time they had met with no ice; but after passing the straits to the east there was very much drift ice from the sea of Kara so as almost to bar their way. Finding that the northern coast of the island was entirely embargoed by ice, they turned to the south, and in passing visited the Straits of Kostin and the Nechwatowa, then Waigatsch, and finally arrived at the Straits of Jugorsky on the 1st of September. Here the expedition did not make any better progress than in the Straits of Matotschkin, and fearing that they might be shut in by the ice for the winter, they returned to their starting-place. Among the more important results of the voyage were numerous soundings and measurements of deep-sea temperatures, as also various geographical determinations; while large collections of specimens of natural history were brought together. Among these the most interesting was the discovery of two different species of lemming in Nova Zembla, and it was thought possible that in Southern Nova Zembla still a third species might be met with. The same animal was also found in Spitzbergen. Numerous birds were obtained in Nova Zembla and Waigatsch; among them the Mandt's Guillemot. Of fishes, some species of cod, cottus, and salmon were obtained, and about one hundred species of plants.

Indian papers give the following additional accounts of the aurora of February 4:—Such a phenomenon has not been observed in the Punjab, or perhaps in India, within the memory of man, and in consequence the remarks made by the natives and others born in the country were rather curious. A curious circumstance took place at Raikote. About 100 Kooka families turned out in the most excited state, and commenced those wild demonstrations from which the name *Kooka* is derived. The men tore off their turbans, unloosed their hair, and began dancing and waving their arms about, and shouting that this was a token that Ram Singh had returned to his home. They were much disappointed to learn that they were mistaken. At Sealkote many thought that the red in the sky was the reflection of the blaze of some hill forest on fire, and one individual at Jhelum suggested that it must be caused by some volcanic eruption in the Himalayas. In another place a commissariat officer was thrown into an agony of terror, thinking it was his haystacks on fire. A correspondent, writing from Madhopore, says:—"On the night of the 4th instant, between 11 and 12 o'clock, there appeared in the sky a clear bright light, like fire, which lasted about fourteen minutes. It was so bright that we were able to see even the minutest objects; owing to its red colour the river appeared as though it were blood. The atmosphere for days has never been clear of clouds, and it seems as if a storm were portending. The lightning injured some natives on the 5th inst."

A correspondent suggests that the memory of Dr. Priestley will not be so worthily honoured by a bad statue as by a thoroughly well-appointed School of Science to be called "The Priestley Institution," or whatever other name be thought fitting. Science is much needed to supplement the technical skill employed in the industries of the Black Country, and is not in that district so well provided for as to render the establishment of such a school unneedful. Or if that undertaking be thought too vast, he proposes the endowment at the Newcastle College or elsewhere of a scholarship of Physical Science, to provide young aspirants from the Midland Counties with opportunities of scientific practice and culture. Or if this suggestion do not find favour, possibly the ingenuity of the committee can devise some scheme of a similar sort, so that thus the funds subscribed for this memorial may be used for science.

We note the proposed formation of a National Swimming Baths Company (Limited), to provide good and cheap swimming baths in the Thames.

According to a communication to the Geological Society of Hungary, the remains of a man, associated with post-tertiary remains of mammalia, together with a stone hammer, have lately been discovered in the loess deposits of Hungary, in the neighbourhood of Brux, in Bohemia. These were in nearly a complete condition. The cranium strongly resembles in its characteristics the well-known fragment from the Neanderthal, although differing in certain peculiarities mentioned in the article. The skeleton was found lying with the head raised, in a sand-bed of diluvial age, at a depth of two feet from the surface.

In making an excavation on the banks of the Amoor River, *Harper's Weekly* states that a stone axe of nephrite, or jade, and beautifully finished, was found at a depth of about three feet. This fact is the more interesting as it bears upon the question in regard to the celebrated stone-tipped arrows which were used by the primeval inhabitants of Mantchuria as late as the twelfth century. It was with arrows winged with eagles' feathers and tipped with nephrite points that this people paid their tribute to China while they were under its dominion. The precise locality of nephrite in Mantchuria is unknown, although it is stated by some to have been on a mountain to the north-west of that country.

The Perthshire Society of Natural Science held its Annual Meeting on March 7, when Colonel H. M. Drummond Hay was elected president in the room of Dr. Buchanan White, who has held the office for five years. This enterprising society must be congratulated on the work it has done in the exploration of the natural history of the county, and in the commencement of the publication of so valuable a work as the *Fauna Perthensis*, and the promotion of so useful a periodical as the *Scottish Naturalist*. Botany seems, however, up to the present time, to have been neglected by the Society, which is to be regretted in a county with so rich and interesting a flora. The Society has also held "a meeting for investigation into the qualities, as articles of food, of certain Perthshire animals," commonly known as a "Frog-supper." Among the articles of the bill of fare were—Pâté d'Ecureuil, Matelot de Grenouille, Alouette à la Crapaudine, Ecureuil au naturel.

An Act passed by the Governor-General of India in Council in October last, with a view to provide for the ultimate adoption of a uniform system of weights and measures of capacity throughout British India, has been laid before the House of Commons. The Act directs that the unit of weight shall be a "ser," equal to the French kilogramme, and the unit for measures of capacity, a measure containing one such ser of water at its maximum density, weighed in a vacuum. Other weights and measures of capacity, to be authorised under this Act, are to be integral multiples or sub-multiples of their units, the sub-divisions to be expressed in decimal parts unless otherwise ordered. When proper standards have been provided for verification of these weights and measures to be used by any Government office, municipal body, or railway company, the Governor-General in Council may direct that the weights and measures as authorised shall be used in dealings by such office, body, or company. The local Government may prepare tables of the equivalents of other weights and measures in terms of the weights and measures so authorised.

Dr. W. Lauder Lindsay announces as in preparation, "Mind in the Lower Animals," a popular exposition of those traits in the habits of animals that illustrate their possession of the higher as well as the lower faculties of mind, as it exists in man. Dr. Lindsay has already written extensively on the subject in the *Journal of Mental Science* and the *British and Foreign Medico-Chirurgical Review*.

The second enlarged and improved edition is published of Dr. O. W. Thomé's "Lehrbuch der Botanik," intended especially for elementary classes of botany in gymnasia and public schools. Although some portions of the work, especially the systematic, are open to exception, yet it presents the elements of the different departments of botanical science in a more compact form, and at a lower price (3*s*.) than probably any other work. It is illustrated by nearly 900 woodcuts.

Mr. Shirley Hibberd has in the press a volume entitled "The Ivy, a Monograph," which will shortly be published by Messrs. Groombridge and Sons.

A useful catalogue is published at Ghent, entitled, "Nomenclature usuelle de 550 Fibres Textiles, avec indication de leur provenance, leurs usages," &c., by the conservator of the commercial-industrial museum in that city.

Messrs. Groombridge and Sons are preparing a new edition, with coloured plates, of Mr. Lambton J. H. Young's "Sea Fishing as a Sport."

Mr. B. S. Lyman, mining engineer to the Public Works Department of the Government of India, reprints from the "Transactions of the American Philosophical Society" an account of the Punjab Oil Region, accompanied by a geological and topographical map.